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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/635,605	08/07/2003	Keiji Hosotani	241341US2S	9585
22850	7590	07/13/2005	EXAMINER	
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			PERT, EVAN T	
			ART UNIT	PAPER NUMBER
			2826	

DATE MAILED: 07/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/635,605

Applicant(s)

HOSOTANI, KEIJI

Examiner

Evan Pert

Art Unit

2826

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 2,5 and 7-12 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-21 is/are allowed.
- 6) ☒ Claim(s) 1,3 and 6 is/are rejected.
- 7) ☒ Claim(s) 4 and 22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 0803, 0605
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Election/Restrictions

2. Claims 2, 5, and 7-12 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on April 18, 2005.

Specification

3. The specification is objectionable since lines 4-9 at p. 1 are superfluous and redundant over field [30] of an issued patent. Applicant's claim for priority to a foreign document under 35 USC 119 is acknowledged, yet "incorporating by reference" has no meaning unless essential subject matter was omitted from the US filing, in which case a certified English translation is required. Lines 4-9 at p. 1 should be deleted as being redundant, without affecting applicant's claim to a priority date of August 7, 2002, unless it becomes apparent that essential subject matter is being incorporated into the US application, in which case applicant should make such subject matter available in English in the US application.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 3 and 6 are rejected under 35 U.S.C. 102(b) as being anticipated by Zhu et al. (US 5,838,608):

Regarding claim 1, the Zhu et al. reference discloses a semiconductor integrated circuit device (i.e. an MRAM) comprising: a first wiring (28) extending in a first direction (cover figure), a second wiring (25) extending in a second direction crossing the first direction (cover figure); and a magnetoresistive effect device (32) including a first magnetic layer (38), nonmagnetic layer (37), and second magnetic layer (36), wherein the planar shape of the magnetoresistive effect device "coincides" with the planar shape of the crossing portion between the first wiring and the second wiring (i.e. the magnetoresistive effect device is patterned along with the width of the first wiring and is then patterned the other way along with the width of the second wiring, like applicant's meaning of "coincides").

Regarding claim 3, the Zhu et al. reference shows that a diode 33 is "stacked" and diode 33 is inherently a "rectifying device" [Fig. 2 with cover figure].

Regarding claim 6, the Zhu et al. reference discloses a semiconductor integrated circuit device (i.e. an MRAM) comprising: a first wiring extending in a first direction (74, 75); a second wiring extending in a second direction crossing the first direction (76, 77), and a magnetoresistive effect device (78), including a first magnetic layer (54), nonmagnetic layer (55), and second magnetic layer (56), wherein the magnetoresistive effect device is a magnetoresistive effect device constituted by a magnetic recording layer including a magnetic layer, a tunnel blocking layer including a nonmagnetic layer, and a magnetized fixed layer including a magnetic layer, wherein the planar shape of the magnetic recording layer coincides with the planar shape of the crossing portion between the first wiring and the second wiring and the planar shape of the magnetized fixed layer coincides with the planar shape of the first wiring (i.e. the magnetoresistive effect device is patterned along with the width of the first wiring and is then patterned the other way along with the width of the second wiring, like applicant's meaning of "coincides").

6. Claims 1, 3 and 6 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by US 2002/00118361 to Hoffmann et al. (see Fig. 8a, Fig. 9 w/ [0001] through [0013]).

Note that for this rejection, the examiner adopts the plain meaning of "coincides" such that the planar cross section of cells at where wirings cross in Figs. 8a and 9 of the '361 publication can reasonably be considered to "coincide" with the upper and lower wiring because the diagrammatic depiction shows that the ML1-TL-ML2 sandwich of the

magnetoresistance effect device perfectly “coincides” with widths of upper and lower wirings BL and WL, respectively.

Note that while a diode (i.e. “rectifying device”) is not shown, the advantages of a diode stacked with the magnetoresistance effect device are discussed at [0012] to [0013].

Allowable Subject Matter

7. Claims 13-21 are allowed.
8. Claims 4 and 22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
9. The following is a statement of reasons for the indication of allowable subject matter:

Regarding claims 13-21, the closest prior art does not disclose applicant’s claimed methodology, even though the closest prior art does anticipate device claims. For example, in the allowable method claims, the first limitations of the claims require forming an insulating layer on a semiconductor substrate, a metal layer on the insulating layer, which is not taught by the Zhu et al. reference, which shows the wiring 74, 75 directly on a “semiconductor substrate 50” or a “glass substrate 50.” The examiner is not aware of any motivation to modify the Zhu et al. reference disclosure to arrive at applicant’s claimed methodology.

Regarding claims 4 and 22, the claim limitations drawn to the configuration of “third wiring” is a way to distinguish applicant’s claimed device from prior art.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The documents to Katti et al. (Fig. 3), Schuster-Woldan et al. (Fig. 1) and Shi (cover figure) show that the magnetoresistance effect device does not "coincide" with upper and lower wirings as claimed by applicant.

The documents to Gogl et al. and Deak are cited for showing that the magnetoresistance effect device at the crossings of wirings is thought of as "coinciding" with upper and lower wirings that cross, even if "coincide" is a relative term by the dictionary plain meaning.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Evan Pert whose telephone number is 571-272-1969. The examiner can normally be reached on M-F (7:30AM-3:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn can be reached on 571-272-1915. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ETP
July 6, 2005


EVAN PERT
PRIMARY EXAMINER